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EXAMINER	
MILLER, JEAN-PAUL	

ART UNIT	PAPER NUMBER
4141	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/824,303	MONASTERIO, MICHAEL	
	Examiner	Art Unit	
	JEAN-PAUL MILLER	4141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4/14/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/1/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-42 are pending.

Oath/Declaration

The Oath is defective. It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56. The form sent only makes reference to 37 CFR 1.56(a).

Drawings

1. The drawings were received on 4/14/2004. These drawings are accepted.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims **18, 19 and 20**, the phrase **"'at least about 1%", "at least about 5%, "at least about 10%"** renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 5 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 14 do not contain clear and concise description of the claimed material. **Most notably in claim 14** the phrase **"... if it is determined the process is not delinquent after throttling for an insufficient period of time."** Both of the claims,

5 and 14, are talking about duration of suspension and '**insufficient**' as used with '**determined**' in these phrases means "to make a guess" because a determination on duration, or period of time, was made with '**insufficient**' information about a period of time.

Claim 5 contains similar verbiage with the phrase "**... suspension period of the ... an insufficient number of monitoring intervals".**

2. Claims 6, 22, and 40. Spell out all abbreviations in independent claims. **'CPU'** has not been spelled out in the respective claims. Correction requested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, 14-21, and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by the Patent 6,067,557 dated May 23, 2000 (Hegde)

As per claim 1, Hegde teaches:

- "**determine whether a process is delinquent for utilizing a percentage of CPU resources above a desired threshold percentage**;" ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") determination of percentage of CPU usage is required to accomplish the patented material stated.

- "**a throttling component that suspends a delinquent process**" ((Hegde) Col 5, lines 53-54, "The system has a "preemptive priority" environment. In other words, a higher priority process should be able to preempt the currently executing process") preemption is a type of suspension.

**- "for a variable amount of time before resuming the process to reduce the percentage of CPU resources occupied by the delinquent process;
a monitoring component that monitors a delinquent process to provide real-time feedback information regarding CPU resource usage by the delinquent process."** ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick and process priorities are adjusted so that the appropriate process is scheduled for the next tick and the requested percentage of CPU bandwidth is given to each process") This details a monitoring method with further detailing how it works to figure out adjustments to the time it takes for a process to get restarted and gives out a variable amount of time before the process starts again to meet the percentage requirements.

As per claim 2, the rejection of claim 1 is incorporated and further, Hegde teaches:

- "the process is comprised by an object, where an object comprises at least one of a plurality of processes, a process group, and a process tree." ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") a process tree is just a further revision of a group of processes where the group is structured.

As per claim 3, the rejection of claim 2 is incorporated and further, Hegde teaches:

"comprising and artificial intelligence component" ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18") What Hegde has detailed here is also known as a type of artificial intelligence called a 'table lookup agent'.

As per claim 4, the rejection of claim 3 is incorporated and further, Hegde teaches:

"**increases duration of the suspension period of the delinquent process if the delinquent process continues to occupy an above-threshold percentage of CPU resources after suspension and resumption of the delinquent process**." ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") Hegde describes a systematic approach in this paragraph that effects the claim's result.

As per claim 5, the rejection of claim 4 is incorporated and further, Hegde teaches:

"decreases duration of the suspension period of the delinquent process if the process occupies a below-threshold percentage of CPU resources for an insufficient number of monitoring intervals" ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") Hegde describes a systematic approach in this paragraph that effects the claim's result.

As per claim 6, Hegde teaches:

"determining whether a process is delinquent for occupying more than the predetermined threshold percentage of CPU resources;" ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") determination of percentage of CPU usage is required to accomplish the patented material stated.

"monitoring a delinquent process for a fixed time period" ((Hegde) Col 6, lines 12-13, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick") The system Hegde's uses a fixed time period of one timer tick.

"suspending the entire delinquent process for a variable time period to initiate throttling of the delinquent process; resuming the entire delinquent process to complete throttling of the delinquent process." ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick and process priorities are adjusted so that the appropriate process is scheduled for the next tick and the requested percentage of CPU bandwidth is given to each process") This will suspend the process for an indefinite period of time depending on what other processes or in the pool and therefore is a variable time. And resume it when reaches the proper value in the table.

As per claim 7, the rejection of claim 6 is incorporated and further, Hegde teaches:

"throttling an object if the object comprises a delinquent process." ((Hegde) Col 4, lines 35-36, "to a process or a group of processes") The objects that the Hegde system works on are processes.

As per claim 8, the rejection of claim 7 is incorporated and further, Hegde teaches:

"determining whether the process is still delinquent after throttling by comparing

CPU resource usage after throttling to the predetermined threshold percentage." ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") this system will compare the resources after it was throttled and compare it to CPU usage.

As per claim 9, the rejection of claim 8 is incorporated and further, Hegde teaches:

"adjusting the duration of the suspension period of the delinquent process if the process is still delinquent." ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") this system will compare the resources after it was throttled and compare it to CPU usage and adjust the duration of suspension automatically.

As per claim 10, the rejection of claim 9 is incorporated and further, Hegde teaches:

"the magnitude of the adjustment to the suspension period is predetermined" ((Hegde) Col 7, lines 5-6, "its count value is decremented by one") It is predetermined to be the value one tick.

As per claim 11, the rejection of claim 9 is incorporated and further, Hegde teaches:

"increasing the duration of the suspension of the delinquent process if the process is still delinquent" ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") This describes how the suspension of the process with be held until such a time when it is not considered delinquent.

As per claim 12, the rejection of claim 8 is incorporated and further, Hegde teaches:

"determining whether the process remains below the threshold CPU resource usage percentage for a predetermined sufficient time period if the process is not

delinquent after throttling." ((Hegde) Col 4, lines 60-61, "assigning to each of the plurality of processes a count value relative to each of the process' priority, wherein the lowest priority process is assigned a base count value, and each higher priority process is assigned a count value which is determined based on the ratio of its priority to the process with the lowest priority") a percent is just a ratio with a base of one hundred and the count value used gives a predetermines time in CPU ticks before it would be removed from throttle state.

As per claim 14, the rejection of claim 12 is incorporated and further, Hegde teaches:

"decreasing the duration of suspension of the delinquent process if it is determined the process is not delinquent after throttling for an insufficient period of time." ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") this describes the method to determining if the process is not delinquent anymore and how it will automatically decrease the duration of suspension.

As per claim 15, the rejection of claim 9 is incorporated and further, Hegde teaches:

"employing artificial intelligence techniques to infer an appropriate adjustment to the duration of suspension of the delinquent process if the process is still delinquent after throttling" ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18") What Hegde has detailed here is also known as a type of artificial intelligence called a 'table lookup agent'.

As per claim 16, the rejection of claim 9 is incorporated and further, Hegde teaches:

"inferring an appropriate adjustment to suspension duration of the delinquent process based at least in part on the magnitude of the monitored reduction in CPU resource consumption by the delinquent process after throttling." ((Hegde) Col 7, lines 3-5, "if the currently executing process is no longer the process with the highest count value (step 44), the system loops back to step 36 where the process having the current highest count value is executed, and its count value is decremented by one (step 38)") this method described indirectly is required to use the magnitude of

CPU resource. Where as the highest "priority" processes get run the suspension duration of the suspended processes are adjusted.

As per claim 17, the rejection of claim 7 is incorporated and further, Hegde teaches:

"**predetermined threshold percentage of CPU resources is selected by an administrator**" ((Hegde) Col 5, lines 15-16, "registering each of the plurality of processes and an associated bandwidth requirement")and ((Hegde) Col 9, lines 3-5, "All the processes that have not registered with the bandwidth manager will be treated as a single group of processes, such as Process Po, above")This shows that not all processes need to be registers and an administrator will need to register them.

As per claim 18, the rejection of claim 17 is incorporated and further, Hegde teaches:

"the predetermined threshold percentage is at least about 1%" ((Hegde) Col 6, line 36, "For example, if process Pa has requested 10%") 10% is at least 1%.

As per claim 19, the rejection of claim 17 is incorporated and further, Hegde teaches:

"the predetermined threshold percentage is at least about 5%" ((Hegde) Col 6, line 36, "For example, if process Pa has requested 10%") 10% is at least 5%.

As per claim 20, the rejection of claim 17 is incorporated and further, Hegde teaches:

"the predetermined threshold percentage is at least about 10%" ((Hegde) Col 6, line 36, "For example, if process Pa has requested 10%") 10% is at least 10%.

As per claim 21, the rejection of claim 7 is incorporated and further, Hegde teaches:

"performed on at least one of a terminal server, a Windows server, a non-terminal server, a desktop PC, a laptop, and a handheld computing device" ((Hegde) Col 9, lines 8-9, "The method of the present invention may be implemented in a general purpose computer 100 as shown in FIG. 3.") This is a desktop PC.

As per claim 40, Hegde teaches:

- "**determining whether a process is delinquent for occupying CPU resources above a selectable predetermined percentage of CPU resources**" ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") determination of percentage of CPU usage is required to accomplish the patented material stated.

- "**means for monitoring a delinquent process**" ((Hegde) Col 5, lines 53-54, "The system has a "preemptive priority" environment. In other words, a higher priority process should be able to preempt the currently executing process") preemption is a type of suspension.

- "**means for monitoring a delinquent process; means for suspending the delinquent process for a variable period of time; and means for determining whether the process is still delinquent after suspension.**" ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick and process priorities are adjusted so that the appropriate process is scheduled for the next tick and the requested percentage of CPU bandwidth is given to each process") this details a monitoring method with further detailing how it works to figure out adjustments to the time a process gets suspended and further determines when it is not delinquent.

As per claim 41, the rejection of claim 40 is incorporated and further, Hegde teaches:

"**means for varying the duration of suspension of the delinquent process based at least in part on feedback/feed-forward information generated by the means for monitoring**" ((Hegde) Col 5, lines 29-32, "management means to reiteratively determine which of the plurality of processes should be currently executed based on the percentage of bandwidth allocated to each process") there is feedback/feed forward from the management means.

As per claim 42, the rejection of claim 40 is incorporated and further, Hegde teaches:

"**means to exempt at least one of a process, an object, and a specified user, from CPU throttling**" ((Hegde) Col 9, lines 3-5, "All the processes that have not registered with the bandwidth manager will be treated as a single group of processes, such as Process Po, above, and are allocated whatever CPU bandwidth is available after the registered processes are allocated their required bandwidth") these left over processes will not be considered in the algorithms and ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of

processes") suggests entire groups can be considered as one, such as all processes of a users.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 13, and 22-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent 6,067,557 dated May 23, 2000 (Hegde) in view of Patent 5,748,958 dated May 5, 1998 (Badovinatz et al.)

As per claim 13, the rejection of claim 12 is incorporated and further:

(Hedge) does not explicitly disclose the limitation "ceasing monitoring"

However, (Badovinatz et al.) in an analogous art discloses ***"ceasing monitoring:*** ((Badovinatz et al.), Col. 14 lines 26-44, "STEP 1306 'REMOVE PROCESS,' and all of the group members are notified of the change.") This invention can remove processes from monitoring.

Therefore, It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Badovinatz to have the capability of removing a process as further explained with Hedge's disclosure because one of the ordinary skill in the art would be motivated to mitigate the system failure. (See Badovinatz, Col. 3 lines 14-21, "techniques of the present invention are used in distributed computing environments in order to provide multicomputer applications that are highly-available. Applications that are highly-available are able to continue to execute after a failure. That is, the application is fault-tolerant and the integrity of customer data is preserved.").

As per claim 22, (Hegde) teaches:

- "**determine whether a process is delinquent for occupying more then a predetermined percentage of CPU resources**" ((Hegde) Col 4, lines 35-36, "by

allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") determination of percentage of CPU usage is required to accomplish the patented material stated.

- **"determining whether a process is delinquent for occupying more than a predetermined percentage of CPU resources; monitoring a delinquent process;"** ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick and process priorities are adjusted so that the appropriate process is scheduled for the next tick and the requested percentage of CPU bandwidth is given to each process") This shows a system for monitoring and determining is a need for throttling exists.

(Hegde) does not explicitly disclose the "determining whether an exemption from CPU throttling exists" *and* ***"terminating monitoring of the delinquent process".*** However, (Badovinatz et al.) in an analogous art discloses ***"determining whether an exemption from CPU throttling exists"*** *and* **"terminating monitoring of the delinquent process"** ((Badovinatz et al.), Col. 14 lines 26-44, "STEP 1306 'REMOVE PROCESS,' and all of the group members are notified of the change.") This invention can determine if removal is needed and then remove processes from monitoring.

Therefore, It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Badovinatz et al. to have the capability of removing a process as further explained with Hedge's disclosure because one of the ordinary skill in the art would be motivated to mitigate the system failure. (See Badovinatz, Col. 3 lines 14-21, "techniques of the present invention are used in distributed computing environments in order to provide multicomputer applications that are highly-available. Applications that are highly-available are able to continue to execute after a failure. That is, the application is fault-tolerant and the integrity of customer data is preserved.").

As per claim 23, the rejection of claim 22 is incorporated and further, (Hegde) teaches:

- ***"where an object comprises at least one of a plurality of processes, a process group, and a process tree."*** ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") a process tree is just a further revision of a group of processes where the group is structured.

As per claim 24, the rejection of claim 22 is incorporated and further, (Hegde) teaches:

- ***"running the process for a fixed time period"*** ((Hegde) Col 6, lines 12-13, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick") The system Hegde's uses a fixed time period of one timer tick.

As per claim 25, the rejection of claim 24 is incorporated and further, (Hegde) teaches:

- ***"suspending the delinquent process for a variable time"*** ((Hegde) Col 6, lines 12-14, "the CPU bandwidth manager determines which process is allocated the next tick of CPU bandwidth by looking at table 18. The values in the table are updated every timer tick and process priorities are adjusted so that the appropriate process is scheduled for the next tick and the requested percentage of CPU bandwidth is given to each process") This details a monitoring method with further detailing how it works to figure out adjustments to the time it takes for a process to get restarted and gives out a variable amount of time before the process starts again to meet the percentage requirements.

As per claim 26, the rejection of claim 25 is incorporated and further, (Hegde) teaches:

- ***"resuming the process after the suspension period"*** ((Hegde), Col. 5 line 20, "Executing the process determined in step (c)") This is referencing about resuming a process previously preempted.

As per claim 27, the rejection of claim 26 is incorporated and further, (Hegde) teaches:

- ***"***determining whether the process is still delinquent after throttling by comparing the percentage of CPU resources occupied by the process" ((Hegde), Col. 5 lines 17-20, "(b) ranking the plurality of processes based on each process' bandwidth requirement; (c) determining which process should be executed based on the ranking; and (d) executing the process determined in step (c). ") This details a system which determines delinquent states of process as claimed.

As per claim 28, the rejection of claim 27 is incorporated and further, (Hegde) teaches:

- ***"adjusting the duration of the suspension period if the process is still delinquent after throttling"*** ((Hegde), Col. 5 lines 17-20, "(b) ranking the plurality of processes based on each process' bandwidth requirement; (c) determining which process should be executed based on the ranking; and (d) executing the process determined in step (c). ") This details a system which adjusts the duration of a delinquent process as claimed.

As per claim 29, the rejection of claim 28 is incorporated and further, (Hegde) teaches:

- ***"comprising increasing the duration the suspension period if the process is determined to be consuming a greater percentage of CPU resources than the predetermined threshold percentage."*** ((Hegde), Col. 5 lines 17-20, "(b) ranking the plurality of processes based on each process' bandwidth requirement; (c) determining

which process should be executed based on the ranking; and (d) executing the process determined in step (c). ") This details a system which will increase the duration of a delinquent process suspension period until a threshold is reached as claimed.

As per claim 30, the rejection of claim 29 is incorporated and further, (Hegde) teaches:

- ***"increasing the duration of the suspension period by predetermined increments."*** ((Hegde), Col. 4 lines 60-62, "assigning to each of the plurality of processes a count value relative to each of the process' priority, wherein the lowest priority process is assigned a base count value,")

As per claim 31, the rejection of claim 29 is incorporated and further, (Hegde) teaches:

- ***"comprising making inferences regarding a most effective increment of increase to the suspension period duration"*** ((Hegde), Col. 5 lines 29-32, "system timer means for interrupting the management means to cause the management means to reiteratively determine which of the plurality of processes should be currently executed based on the percentage of bandwidth allocated to each process. ") This explains a system that makes inferences regarding the most effective suspension period timing.

As per claim 32, the rejection of claim 31 is incorporated and further, (Hegde) teaches:

- ***"inferences are based at least in part on a comparison of the percentage of CPU resources occupied by the process before and after throttling." "*** ((Hegde), Col. 5 lines 29-32, "system timer means for interrupting the management means to cause the management means to reiteratively determine which of the plurality of processes should be currently executed based on the percentage of bandwidth allocated to each process. ") This passage details a system that will constantly check based on percentage both before after and during throttling.

As per claim 33, the rejection of claim 28 is incorporated and further, (Hegde) teaches:

- ***"decreasing the duration of the suspension period if the process is determined to be consuming a lesser percentage of CPU resources than the threshold percentage"*** ((Hegde), Col. 5 lines 29-32, "system timer means for interrupting the management means to cause the management means to reiteratively determine which of the plurality of processes should be currently executed based on the percentage of bandwidth allocated to each process.") The system described will decrease the suspension period

As per claim 34, the rejection of claim 33 is incorporated and further, (Hegde) teaches:

- ***"suspension period duration is decreased by predetermined increments."*** ((Hegde), Col. 6 lines 58-60, "In step 36, the process currently assigned the highest count value is executed and, in step 38, its count value is decremented by one") This explains a duration decrease in predetermined increments of single units.

As per claim 35, the rejection of claim 34 is incorporated and further, (Hegde) teaches:

- ***"making inferences regarding a most effective increment of decrease to the suspension period duration"*** ((Hegde), Col. 5 lines 29-32, "system timer means for interrupting the management means to cause the management means to reiteratively determine which of the plurality of processes should be currently executed based on the percentage of bandwidth allocated to each process. ") This explains a system that makes inferences regarding the most effective suspension period timing.

As per claim 36, the rejection of claim 35 is incorporated and further, (Hegde) teaches:

- ***"the inferences are based at least in part on a comparison of the number if intervals for which the process consumed CPU resources at a percentage below the predetermined threshold percentage and the predetermined threshold number of intervals."*** ((Hegde), Col. 5 lines 29-33, "system timer means for interrupting the management means to cause the management means to reiteratively determine which of the plurality of processes should be currently executed based on the percentage of bandwidth allocated to each process. ") the determination it is making is based on percentage of a pre determined threshold percentage and a pre determined threshold interval.

As per claim 37, the rejection of claim 23 is incorporated and further, (Hegde) teaches:

- ***"predetermined threshold percentage is selectable by an administrator"*** ((Hegde) Col 5, lines 15-16, "registering each of the plurality of processes and an associated bandwidth requirement")and ((Hegde) Col 9, lines 3-5, "All the processes that have not registered with the bandwidth manager will be treated as a single group of processes, such as Process Po, above")This shows that not all processes need to be registers and an administrator will need to register them.

As per claim 38, the rejection of claim 23 is incorporated and further, (Hegde) teaches:

- **"the exemption of the process from CPU throttling is based at least in part on at least one of an exemption of the process itself, an exemption of a user utilizing the process, and an exemption of the object comprising the process, if the process is comprised by an object"** ((Hegde) Col 4, lines 35-36, "by allocating a guaranteed percentage of CPU bandwidth to a process or a group of processes") a

group of processes is an object that is can have a limit set for one of the objects and therefore is "**at least in part on at least one of**" the above mentioned items.

As per claim 39, the rejection of claim 23 is incorporated and further, (Hegde) teaches:

- ***"*on at least one of a terminal server, a non-terminal server a Windows server, a desktop PC, a laptop, and a handheld computing device"** ((Hegde) Col 9, lines 8-9, "The method of the present invention may be implemented in a general purpose computer 100 as shown in FIG. 3.") This is a desktop PC.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN-PAUL MILLER whose telephone number is (571)270-3894. The examiner can normally be reached on Monday to Thursday 7:30-17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chameli Das can be reached on (571)272-3696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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